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September 17, 2002

Ms. Kristy Chew
Siting Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

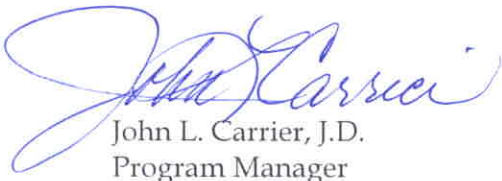
RE: Data Responses, Informal Set 5
Cosumnes Power Plant (01-AFC-19)

On behalf of the Sacramento Municipal Utility District, please find attached our Informal Data Responses, Set 5, in response to some of Staff's data request at the PSA Issues Resolution Workshop held in August 2002.

Please call me if you have any questions.

Sincerely,

CH2M HILL



John L. Carrier, J.D.
Program Manager

c: Colin Taylor/SMUD
Kevin Hudson/SMUD
Steve Cohn/SMUD

COSUMNES POWER PLANT (01-AFC-19)

INFORMAL DATA RESPONSE, SET 5

Submitted by
**SACRAMENTO MUNICIPAL
UTILITY DISTRICT (SMUD)**

September 17, 2002



2485 Natomas Park Drive, Suite 600
Sacramento, California 95833-2937

Technical Area: Biological Resources

CEC Authors: Melinda Dorin and Rick York

CPP Author: EJ Koford

BACKGROUND

The following information was requested at the PSA Issues Resolution Workshop held on August 26, 2002.

DATA REQUEST

BIO-10. Please provided a copy of the formal Section 7 consultation for the prior SMUD gas pipeline.

Response: Attached are the amendment and the letter from SMUD to USFWS requesting a review of the mitigation requirements for SMUD's previous natural gas pipeline project. CEC staff should find this useful to ensure that mitigation for the current project is developed in a manner consistent with the previous project.

Attached is a copy of the following correspondence:

- Letter dated May 30, 1977 from Lonn Maier (SMUD) to Wayne White (USFWS)
- Letter dated May 20, 1998 from Wayne White (USFWS) to Art Camp (USACOE)

**May 30, 1997
Env 97-168**

**Wayne S. White, Field Supervisor
Fish and Wildlife Service
Ecological Services
3310 El Camino Avenue
Sacramento, CA 95821**

Re: Review of Mitigation Bank Requirements for SMUD's Cogeneration Natural Gas Pipeline and Procter and Gamble Cogeneration Projects

Dear Mr. White,

We appreciate meeting with Deblon Mead last week regarding mitigation requirements for two projects. The Sacramento Municipal Utility District (SMUD) has completed construction of the Cogeneration Natural Gas Pipeline Project, and is nearing completion of the Procter and Gamble Cogeneration Project. For these projects, the Fish and Wildlife Service (Service) required SMUD to establish a mitigation bank to compensate for losses of fresh-water shrimp habitat in accordance with section 7 of the Endangered Species Act. We have requested Ms. Mead to review and consider renegotiation of this requirement in light of the information that follows.

Background SMUD is completing a total of three new electrical generating projects which will provide over 350 megawatts of additional electrical power for the service area. This power will replace in part purchased power from other utilities which has been required since the closure of SMUD's Rancho Seco Nuclear Generating Facility in 1989. Fuel to these projects is provided by a 51-mile natural gas pipeline which originates in Winters, California, terminating at each of the new power plants.

Through careful siting and alternatives analysis, SMUD was able to avoid any potentially significant environmental impacts resulting from construction of the projects, although many sensitive areas, including wetlands and vernal pools, are found in adjacent areas to the projects and pipeline route.

A portion of the natural gas pipeline is located in the Union Pacific Railroad right-of-way. This area is devoid of vegetation, however depressions located in the

right-of-way pond water in the rainy season (refer to photographs in the attached *Fairy Shrimp Survey Report* dated April 16, 1996). This particular route for the pipeline was chosen because of minimal impacts to biological resources.

Prior to pipeline construction, vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*) were located in the railroad right-of-way within water-filled depressions. This was contrary to known information regarding the species, which were believed to reside only in vernal pools. Similar habitat was found at the Procter and Gamble Cogeneration Plant site.

Consultation and mitigation discussions Pursuant to requirements of the Endangered Species Act, SMUD approached the Service beginning in February 1994, to consult on mitigating for this perceived impact. Through discussions with the Service, it was ultimately required that a mitigation bank be provided as mitigation. It was determined by Service staff that the population of shrimp in the right-of-way would likely be permanently lost as a direct result of project construction.

As directed by the Service, SMUD agreed to set aside 200 acres of land containing vernal pools to be used as a mitigation bank, with SMUD being required to preserve 25.5 acres and create 1.2 acres of wetlands within the bank. This mitigation was based on an estimated area of 13.50 acres of projected impact along the Union Pacific Railroad.

Post-construction survey results The construction of the natural gas pipeline was completed November, 1995. Since the Service did not require that any special construction methods for shrimp preservation be incorporated along the Union Pacific Railroad right-of-way, none were implemented. In essence, soils were disrupted to a depth of 8 feet with no effort to preserve the shrimp populations. The actual area of water-filled depressions impacted by the project was 4.65 acres, not 13.5 acres as originally determined. The remaining 8.85 acres were the upland component of the water-filled depressions. Impacts were sustained on one side only of the railroad tracks.

Beginning in January, 1996, Woodward-Clyde Consultants were retained to perform surveys along the right-of-way areas where shrimp were first discovered. SMUD staff were desirous in knowing what the survivorship of the shrimp was following construction, even though no habitat preservation was required nor was attempted. This post-construction survey data was compared with pre-construction survey data.

As a result of the surveys, it was found that populations of both species (*L. packardii* and *B. lynchi*) of shrimp had re-established themselves located within the right-of-way. Pre- and post-construction surveys showed actual areas of habitat

for tadpole shrimp and fairy shrimps as follows in Table 1 (refer to attached *Fairy Shrimp Survey Report*).

Table 1.

	Pre-construction acres occupied	Post-construction acres occupied
<i>L. packardii</i>	4.50 acres	4.23 acres
<i>B. lynchi</i>	4.63 acres	4.15 acres

The pre-construction habitat measured area for the two species of shrimp was 4.65 acres, excluding the upland areas. The post-construction habitat area for the two species was 4.23 acres. The approximate loss of aquatic habitat for the two species was 0.42 acres, or 9% of the total project area. Please refer to the attached consulting biologists report for details of the surveys.

Summary Based on 1) the post-construction survey finding a viable population of shrimp, and 2) the actual impacts of the project (4.65 acres), we are requesting the Service to re-evaluate the requirement for SMUD to set aside land, develop conservation easements totaling 25 + acres, and creation of 1.2 acres of wetlands at Rancho Seco.

We would like to reach closure on this issue by mid-year. Please let us know if we can provide any additional information to expedite this matter. A revised project description is attached for use in revising the section 7 permit. The remainder of the section 7 will be amended as agreed by the Service and SMUD.

If you have any questions regarding this letter, please feel free to call me at (916) 732-6566.

Sincerely,

Lonn Maier
Environmental Specialist

attachments

Attachment 1, revised project description

Description of the Proposed Action

The proposed action consists of the construction of a 51-mile natural gas pipeline that will be owned by SMUD. The pipeline will provide natural gas to the three cogeneration projects SMUD is currently developing (Figure 1). The cogeneration projects and the natural gas pipeline project have already been approved by the California Energy Commission (CEC). The cogeneration projects are:

the Carson Ice Generation Project located adjacent to the Sacramento Regional Wastewater Treatment Plant in South Sacramento;

the Procter and Gamble Cogeneration Project located adjacent to the Procter and Gamble facility in Sacramento; and

the Campbell Soup Cogeneration Project located adjacent to the Campbell Soup facility in Sacramento.

The proposed SMUD Cogeneration Pipeline Project will connect with the existing Pacific Gas and Electric gas lines 400 and 401 just north of Winters, Yolo County.

The pipeline will consist of approximately 25 miles of main gas transmission line with approximately 26 miles of lateral lines to the three cogeneration powerplants. The main line (Segment 1) will continue as a southern segment (Segment 3) and to the cogeneration plants (Segments 4, 5 and 6) (Figure 2).¹ At each project, the pipeline ends where it meets the metering station located on the project site. The pipeline project is more fully described in the Final Staff Assessment (CEC 1993,) and the Commission Decision on the SMUD Cogeneration Pipeline Project (CEC 1994b).

Vernal pool fairy shrimp and/or vernal pool tadpole shrimp occur on the cogeneration project sites and the pipeline route. These species also occur along the transmission line and fiber optic rights-of-way associated with the Procter and Gamble Soup Cogeneration Projects. However, the species in these locations will be avoided during construction.

To better describe the Cogeneration Pipeline Project, below is a brief description of land uses immediately adjacent to the pipeline corridor, the biological resources along the corridor and their location, and a list of conservation measures to avoid and/or mitigate impacts to the resources.

¹ Segment 2 was a proposed connection to a power plant in Rio Linda, but will not be built.

(delete Segment 2 section and references to Segment 2)

(Any references to the 13.5 acres located within the Southern Pacific Railroad right-of-way is to be corrected to 4.65 acres).

(Any references to "vernal pool habitat" needs to be changed to "fresh-water shrimp habitat" since no vernal pools were impacted by construction of the projects or the pipeline.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
3310 El Camino Avenue, Suite 130
Sacramento, California 95821-6340

IN REPLY REFER TO:
1-1-98-I-1289

May 20, 1998

Art Champ
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Subject: Amendment of the Formal Section 7 Consultation for the Sacramento Municipal Utility District (SMUD) Cogeneration Pipeline Project, Sacramento, California (Service Files No. 1-1-95-F-34 and 1-1-96-F-35; Corps File No. 199400976)

Dear Mr. Champ:

This letter represents an agreement from the U.S. Fish and Wildlife Service (Service) to an amendment of the April 7, 1995, biological opinion on the Sacramento Municipal Utility District (SMUD) Cogeneration Pipeline Project (Service File No. 1-1-95-F-34) for the federally listed endangered vernal pool tadpole shrimp (*Lepidurus packardii*) and threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and giant garter snake (*Thamnophis gigas*). A previous amendment (Service File No. 1-1-96-F-35) was issued on April 3, 1996, to address adverse effects on the listed vernal pool crustaceans for an additional 0.08 acre of fill of vernal pools. The requested amendment is a modification of the mitigation plan for the listed vernal pool crustaceans due to modifications of the project. The Service has determined the proposed changes in the mitigation plan will not result in an increase in the anticipated amount of incidental take authorized by the biological opinion issued on April 7, 1995, or the previous amendment issued on April 3, 1996. SMUD's request to review the mitigation requirements for the Cogeneration Pipeline Project, dated November 21, 1996, was received by the Service on November 25, 1996. Additional information was received by the Service on August 1, 1997, August 7, 1997, November 3, 1997, and November 17, 1997.

This amendment is based on: (1) a report on post-construction surveys for the listed crustaceans dated April 16, 1996, prepared by Woodward-Clyde Consultants; (2) a letter dated May 2, 1997, from Mr. Lonn Maier of SMUD; (3) additional information received by the Service from SMUD on August 1, 1997, August 6, 1997, and November 17, 1997; (4) a site visit conducted on May 30, 1997, by Ms. Deborah Mead of my staff and Mr. Maier; (5) meetings with Mr. Maier,

Mr. Pat Frost of SMUD and Mr. Peter Cross and Ms. Mead of my staff; (6) a meeting with Mr. Frost and Mr. Arlen Orchard, legal counsel for SMUD, and Mr. Cross, Ms. Mead, and Ms. Dana Jacobsen, legal counsel for the Service; and (7) information in our files. A complete administrative record is on file the Service's Sacramento Fish and Wildlife Office.

PROJECT HISTORY AND AMENDMENT REQUEST

The biological opinion (Service File No. 1-1-95-F-34) permits the incidental take of all vernal pool tadpole shrimp and vernal pool fairy shrimp inhabiting up to 13.50 acres of seasonal wetlands. The previous amendment (Service File 1-1-96-F-35) permits the additional incidental take of all vernal pool tadpole shrimp and vernal pool fairy shrimp inhabiting an additional 0.08 acre of seasonal wetlands. Mitigation for the above impacts to the listed vernal pool crustaceans included the establishment of a 200-acre mitigation bank at Rancho Seco in Sacramento County. Because less gross area was impacted than originally projected, only 4.65 acres of seasonal wetlands, which are habitat for the listed crustaceans, were affected by the project. The project consisted of a buried pipeline within the affected area containing the listed crustaceans. A post-construction survey for the listed crustaceans found the seasonal wetlands still ponding during the year following project completion and vernal pool tadpole shrimp and vernal pool fairy shrimp were found at some sites.

SMUD is requesting a modification of the mitigation requirements for the listed crustaceans because: (1) the loss of seasonal wetlands (listed crustacean habitat) appears to be temporary, and (2) the amount of seasonal wetlands (listed crustacean habitat) affected was much less than projected. Specifically, SMUD is requesting the creation component of the mitigation be waived and the preservation component of the mitigation be reduced from an approximately 200-acre mitigation bank on Rancho Seco, which included 105 acres of existing vernal pools, to a 9.65-acre mitigation site on a different portion of Rancho Seco. SMUD no longer proposes to establish a mitigation bank, which was initially proposed for the Cogeneration Pipeline Project and future projects, since the future projects are no longer being considered. SMUD now proposes to set aside habitat for the listed crustaceans in perpetuity by recording a conservation easement on the newly identified mitigation site and a buffer around this site (see the enclosed map). This new mitigation site supports a population of Sacramento Orcutt grass, *Orcuttia viscida*, as well as the listed crustaceans. Wetlands occurring within the buffer may be counted toward future mitigation needs for additional adverse effects that future SMUD projects may have on the listed crustaceans as approved by the Service. A management plan to manage the mitigation site in perpetuity will be developed as part of the management plan currently being developed for SMUD's Ranch Seco facility.

AMENDMENT TO EXISTING BIOLOGICAL OPINION

The following amendment to the April 7, 1995, biological opinion (Service File No. 1-1-95-F-34) and the subsequent amendment issued on April 3, 1996 (Service File No.

1-1-96-F-35), on the SMUD Cogeneration Pipeline Project is hereby adopted and incorporated (all page numbers refer to the April 7, 1995, biological opinion):

Terms and conditions (1)(C), (1)(D), and (1)(E) of reasonable and prudent measure (1) of the biological opinion (pages 12-13) are amended as follows:

- C. SMUD shall establish a vernal pool preserve (a mitigation site) which is a minimum of 9.65 acres, as shown on the enclosed map. A buffer zone which is sufficient to fully protect the mitigation site from direct and indirect effects of any activities that occur, or may occur in the future, shall be established by SMUD. A Service-approved conservation easement shall be recorded on the mitigation site and the buffer and a copy of the recorded easement shall be submitted to the Service within one (1) year of the date of this amendment. Wetlands within the buffer may be counted toward future mitigation needs for additional adverse effects that future SMUD projects may have on the listed crustaceans as approved by the Service.
- D. SMUD shall develop a monitoring and management plan for the mitigation site and submit a Service-approved plan to the Service and the California Department of Fish and Game (CDFG) within one (1) year of the date of this amendment. The plan may be part of the overall plan to manage SMUD's Rancho Seco facility. SMUD shall ensure sufficient funds to manage the mitigation site consistent with the terms and conditions provided in the Service-approved conservation easement.
- E. SMUD shall be responsible for the protection and management of the mitigation site in perpetuity. The mitigation site may be transferred to a resource agency or organization as approved by the Service, the Corps, and SMUD.

The second paragraph under Reporting Requirements of the biological opinion (page 13) is amended as follows:

Written reports regarding the monitoring and management of the mitigation site shall be submitted to the Service and the CDFG. Reporting frequency will be appropriate for the monitoring and management plan as developed by SMUD and approved by the Service.

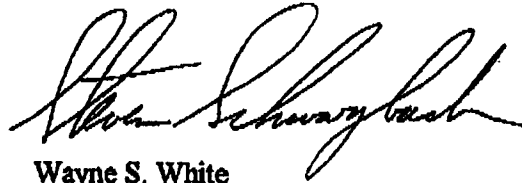
With the exception of the changes described above, all other reasonable and prudent measures and terms and conditions of the biological opinion for the proposed project remain in effect. These terms and conditions are a binding condition of any authorization or permit issued to the applicant in order to be exempt from the prohibitions of section 9 of the Endangered Species Act of 1973, as amended.

Art Champ

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Please contact Ms. Deborah Mead of my staff at (916) 979-2725 if you have questions regarding this response.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne S. White". The signature is fluid and cursive, with a large, stylized "W" and "S".

Wayne S. White
Field Supervisor

Enclosure

cc: AES, Portland, OR
CDFG, Region 2, Rancho Cordova, CA (Attn: David Zezulak)
SMUD, Sacramento, CA (Attn: Patrick Frost)

Technical Area: Water and Soil Resources**CEC Authors:** Philip Lowe, P.E., Greg Peterson, P.E., & Richard Latteri**CPP Author:** Kevin Hudson**BACKGROUND**

CEC staff has requested a 15,000 AFY Folsom-South Canal water consumption limit for operations at Rancho Seco Plant, Rancho Seco Park, and CPP (i.e., cumulative water use for all functions on Rancho Seco property would not exceed 15,000 AFY). This issue was discussed at the Issue Resolution Workshop on August 28, 2002.

DATA REQUEST

W&SR-10: Provide the reasons for excluding the first 15,000 AFY of current FSC water deliveries for use at CPP.

Response: SMUD meets complex contractual, permit, licensing and community obligations by managing the water delivered under its USBR contract via Folsom-South Canal. Under California Regional Water Quality Control Board, Central Valley Region, NPDES Discharge Permit No. CA0004758 (Waste Discharge Requirements Order No. 5-01-182), SMUD “discharges approximately 13 million gallons per day” of treated domestic wastewater, processed radioactive water, and dilution water from the Folsom-South Canal to Clay Creek. SMUD requires sufficient water supply to comply with Nuclear Regulatory Commission established effluent limitations under 10 CFR, Part 50, Appendix I. 10 CFR 20, Appendix B, Table 2, Column 2 establishes allowable concentrations. Additionally, the NPDES permit establishes effluent limitations with allowable concentrations. Folsom-South Canal water is also used to maintain Rancho Seco Reservoir water level and establish circulation necessary to maintain coliform at safe levels for recreational users, as well as causing a daily inflow/outflow that is contributory to maintaining a healthy aquatic environment.. A reasonable flow is also needed to allow for water losses from evaporation and percolation to ground. Therefore, the minimum non-discretionary water quantity required to meet state and federal regulations is 15,000 AFY. This water is not available for other purposes that would not contribute to the attainment of discharge permit requirements.

Discharge to Clay Creek from Rancho Seco Plant and spillover from Rancho Seco Reservoir spillway also support an established riparian habitat. The downstream creek system was seasonally dry prior to establishing the effluent flow in the early 1970s. RWQCB has reviewed

current flow conditions and has determined that the beneficial uses identified in the Cosumnes River Basin Plan are applicable to Clay Creek. Maintaining current discharge flow in Clay Creek is necessary to support the following beneficial uses: potential domestic supply and agricultural supply, water contact and non-contact recreation and esthetic enjoyment, groundwater recharge, freshwater replenishment, and preservation and enhancement of fish, wildlife and other aquatic resources. Sufficient water volume is necessary to preserve these aspects.

While Rancho Seco Plant nuclear decommissioning activities are currently anticipated to be complete by 2008 and non-nuclear decommissioning complete by about 2011, there has not been a determination by state or federal regulators whether the current discharge requirements will extend past decommissioning. SMUD is unable to speculate upon future discharge requirements, and defers to the requirements established by known permits, agreements and licenses.